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EXAMINER

VU, THANH T

ART UNIT PAPER NUMBER

2174

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/985,999

Applicant(s)

AMANO, KOJI

Examiner

Thanh T. Vu

Art Unit

2174

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-49 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This communication is responsive to Amendment, filed 02/03/2006.

Claims 1-49 are pending in this application. In the Amendment, claims 1-5, 14, and 18 were amended. This action is made Final.

Claim Objections

Claims are objected to because of the following informalities: Claims are not number consecutively. Claim number 44 is missing. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, 6, 8, 10-15, 17-19, 27, 35, 39, 43, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Munson et al. (U.S. Pat. No. 6,741,262) in view of Arcuri et al. (U.S. Pat. No. 6,121,968).

Per claim 1, Munson teaches a display device in an image forming apparatus, comprising:

a display unit that displays a plurality of user-selectable image forming function options which can be performed by at least one of the image forming apparatus or an additional device mounted to the image forming apparatus (col. 4, lines 22-32), but does not teach a display

arrangement control device that determines al arrangement of the plurality of user-selectable image forming function options, and arranges the plurality of user selectable image forming function options in the determined arrangement, wherein a plurality of available user-selectable image forming function options are displayed in a first case, less than all of the plurality of the available user-selectable image forming function options that are displayed in the first case are displayed in a second case, and all user-selectable image forming function options displayed in the second case are displayed in the first case, the display arrangement control device modifying the display on the display unit from the first case to the second case so that at least one of the user-selectable image forming function options displayed in both cases is displayed in a position which is different in the first case than in the second case.

However, Arcuri teaches display arrangement control device that determines al arrangement of the plurality of user-selectable image forming function options, and arranges the plurality of user selectable image forming function options in the determined arrangement, wherein a plurality of available user-selectable image forming function options are displayed in a first case, less than all of the plurality of the available user-selectable image forming function options that are displayed in the first case are displayed in a second case, and all user-selectable image forming function options displayed in the second case are displayed in the first case (figs. 2a-2d; col. 2, lines 10-22), the display arrangement control device modifying the display on the display unit from the first case to the second case so that at least one of the user-selectable image forming function options displayed in both cases is displayed in a position which is different in the first case than in the second case (figs. 2a-2d; col. 2, lines 10-22). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to the teaching of

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Arcuri in the invention of Muson in order to provide users with dynamically changing the available selectable options in a given short menu based upon the particular needs and utilization behavior of the user.

Per claim 4, Munson teaches display device in an image forming apparatus, comprising:
a display unit that displays a plurality of user-selectable image forming function options which can be performed by at least one of the image forming apparatus or an additional device mounted to the image forming apparatus (col. 4, lines 22-32), but does not teach a display arrangement control device that determines an arrangement of the plurality of user-selectable image forming function options, and arranges the plurality of user selectable image forming function options in the determined arrangement, wherein a plurality of available user-selectable image forming function options are displayed in a first case, less than all of the plurality of the available user-selectable image forming function options that are displayed in the first case are displayed in a second case, and all user-selectable image forming function options displayed in the second case are displayed in the first case, the display arrangement control device modifying the display on the display unit from the first case to the second case so that the user-selectable image forming function options are displayed with a larger interval between the user-selectable image forming function options in the second case than in the first case.

However, Arcuri teaches a display arrangement control device that determines an arrangement of the plurality of user-selectable image forming function options, and arranges the plurality of user selectable image forming function options in the determined arrangement, wherein a plurality of available user-selectable image forming function options are displayed in a first case, less than all of the plurality of the available user-selectable image forming function

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options that are displayed in the first case are displayed in a second case, and all user-selectable image forming function options displayed in the second case are displayed in the first case (figs. 2a-2d; col. 2, lines 10-22), the display arrangement control device modifying the display on the display unit from the first case to the second case so that the user-selectable image forming function options are displayed with a larger interval between the user-selectable image forming function options in the second case than in the first case (col. 3, lines; items that are displayed in short menu have larger usage count interval). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to the teaching of Arcuri in the invention of Muson in order to provide users with dynamically changing the available selectable options in a given short menu based upon the particular needs and utilization behavior of the user.

Per claim 6, Arcuri teaches the display device according to claim 1, wherein the user-selectable image forming function options include options associated with a duplex image forming function (fig. 2A; Print layout).

Per claim 8, Arcuri teaches the display device according to claim 1, wherein the display unit further comprises a user interface for selection of functions of the image forming apparatus (col. 8, lines 50-56).

Per claim 10, Arcuri teaches the display device according to claim 1, wherein the display arrangement control device maintains the user-selectable image forming function options in a uniform arrangement when the number of the user-selectable image forming function options to be displayed is changed (figs. 2A-2D).

Per claim 11, Arcuri teaches the display device according to claim 1, wherein the display arrangement control device selects from a plurality of display data which are stored in advance

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and uses the selected display data to display the user-selectable image forming function options when the number of the user-selectable image forming function options to be displayed is changed (fig. 2A-2D; col. 3, lines 1-30).

Per claim 12, Arcuri teaches the display device according to claim 1, further comprising a calculating device for determining by calculation display positions of the user selectable image forming function options when the number of the user-selectable image forming function options to be displayed is changed (figs. 2A-2D; col. 3, lines 1-30).

Per claim 13, Arcuri teaches the display device according to claim 1, wherein the user-selectable image forming function options include options associated with a particular function, and the options associated with the particular function are displayed when the particular function is selected on a predetermined display screen displayed on the display unit (fig. 2A-2D; each menu item is associated with a particular function).

Claim 14 is rejected under the same rationale as claim 1.

Claim 15 is rejected under the same rationale as claim 6.

Claim 17 is rejected under the same rationale as claim 10.

Claim 18 is rejected under the same rationale as claim 1.

Claim 19 is rejected under the same rationale as claim 6.

Claim 27 is rejected under the same rationale as claim 8.

Claim 35 is rejected under the same rationale as claim 10.

Claim 39 is rejected under the same rationale as claim 11.

Claim 43 is rejected under the same rationale as claim 12.

Claim 48 is rejected under the same rationale as claim 13.

Claims 2, 5, 25, 28, 33, 36, 37, 40, 41, 45, 46, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Munson et al. (U.S. Pat. No. 6,741,262), Arcuri et al. (U.S. Pat. No. 6,121,968) and Kino et al. ("Kino", US 6,469,719).

Per claim 2, Muson teaches a display device in an image forming apparatus, comprising:
a display unit that displays a plurality of user-selectable image forming function options which can be performed by at least one of the image forming apparatus or an additional device mounted to the image forming apparatus (col. 4, lines 22-32), but does not teach a display arrangement control device that determines an arrangement of the plurality of user-selectable image forming function options and arranges the plurality of user selectable image forming function options in the determined arrangement, wherein a plurality of available user-selectable image forming function options are displayed in a first case, less than all of the plurality of the available user-selectable image forming function options that are displayed in the first case are displayed in a second case, and all user-selectable image forming function options displayed in the second case are displayed in the first case, the display arrangement control device modifying the display on the display unit from the first case to the second case so that at least one of the user-selectable image forming function options displayed in both of the cases is displayed in a size which is different in the first than in the second case.

However, Arcuri teaches a display arrangement control device that determines an arrangement of the plurality of user-selectable image forming function options and arranges the plurality of user selectable image forming function options in the determined arrangement, wherein a plurality of available user-selectable image forming function options are displayed in a first case, less than all of the plurality of the available user-selectable image forming function

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options that are displayed in the first case are displayed in a second case, and all user-selectable image forming function options displayed in the second case are displayed in the first case (figs. 2a-2d; col. 2, lines 10-22). Kino teaches a display device with improved layout of user-selectable image forming function options wherein the display size of at least one of the user-selectable image forming function options are adjusted or reduced (FIG. 1, col.2, lines 46-65, *layout unit, size reducing unit*). It would have been obvious to an artisan at the time of the invention to combine the teachings of Arcuri and Kino with the display device of Muson in order to provide users with dynamically changing the available selectable options in a given short menu based upon the particular needs and utilization behavior of the user and in order to accommodate the fluctuation in the number of menu items without requiring the definition of a plurality of GUI screens with different layouts of menu options (col.2, lines 25- 32).

Per claim 5, Muson teaches a display device in an image forming apparatus, comprising:
a display unit that displays a plurality of user-selectable image forming function options which can be performed by at least one of the image forming apparatus or an additional device mounted to the image forming apparatus (col. 4, lines 22-32), but does not teach a display arrangement control device that determines an arrangement of the plurality of user-selectable image forming function options and arranges the plurality of user selectable image forming function options in the determined arrangement, wherein a plurality of available user-selectable image forming function options are displayed in a first case, less than all of the plurality of the available user-selectable image forming function options that are displayed in the first case are displayed in a second case, and all user-selectable image forming function options displayed in the second case are displayed in the first case, the display arrangement control device modifying

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the display on the display unit from the first case to the second case so that the user selectable image forming function options are displayed in a larger size in the second case than in the first case

However Arcuri teaches a display arrangement control device that determines an arrangement of the plurality of user-selectable image forming function options and arranges the plurality of user selectable image forming function options in the determined arrangement, wherein a plurality of available user-selectable image forming function options are displayed in a first case, less than all of the plurality of the available user-selectable image forming function options that are displayed in the first case are displayed in a second case, and all user-selectable image forming function options displayed in the second case are displayed in the first case (figs. 2a-2d; col. 2, lines 10-22). Kino teaches the display arrangement control device modifying the display on the display unit from the first case to the second case so that the user selectable image forming function options are displayed in a larger size in the second case than in the first case. Kino teaches a display device with improved layout of options wherein the display size of at least one of the options are adjusted or reduced (FIG. 1, col.2, lines 46-65, *layout unit, size reducing unit*). It would have been obvious to an artisan at the time of the invention to combine the teachings of Arcuri and Kino with the display device of Munson in order to provide users with dynamically changing the available selectable options in a given short menu based upon the particular needs and utilization behavior of the user, and in order to display options large enough for the user to discern without making them overly difficult to read (col. 3, lines 5- 23).

Claim 25 is rejected under the same rationale as claim 8.

Claim 28 is rejected under the same rationale as claim 8.

Claim 33 is rejected under the same rationale as claim 10.

Claim 36 is rejected under the same rationale as claim 10.

Claim 37 is rejected under the same rationale as claim 11.

Claim 40 is rejected under the same rationale as claim 11.

Claim 41 is rejected under the same rationale as claim 12.

Claim 45 is rejected under the same rationale as claim 12.

Claim 46 is rejected under the same rationale as claim 13.

Claim 49 is rejected under the same rationale as claim 13.

Claims 3, 26, 34, 38, 42, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Munson et al. (U.S. Pat. No. 6,741,262), Arcuri et al. (U.S. Pat. No. 6,121,968) and Hocker et al. ("Hocker", US' 5,754,179)

Per claim 3, Munson teaches a display device in an image forming apparatus, comprising:
a display unit that displays a plurality of user-selectable image forming function options which can be performed by at least one of the image forming apparatus or an additional device mounted to the image forming apparatus (col. 4, lines 22-32), but does not teach a display arrangement control device that determines an arrangement of the plurality of user-selectable image forming function options, and arranges the plurality of user selectable image forming function options in the determined arrangement, wherein a plurality of available user-selectable image forming function options are displayed in a first case, less than all of the plurality of the available user-selectable image forming function options that are displayed in a first case are displayed in a second case, and all user-selectable image forming function options displayed in the second case are displayed in the first case, the display arrangement control device modifying

the display unit from the first case to the second case so that at least one of the user selectable image forming function options displayed in both of cases is displayed in a shape which is different in the first case than in the second.

However, Arcuri teaches a display arrangement control device that determines an arrangement of the plurality of user-selectable image forming function options, and arranges the plurality of user selectable image forming function options in the determined arrangement, wherein a plurality of available user-selectable image forming function options are displayed in a first case, less than all of the plurality of the available user-selectable image forming function options that are displayed in a first case are displayed in a second case, and all user-selectable image forming function options displayed in the second case are displayed in the first case (figs. 2a-2d; col. 2, lines 10-22). Hocker teaches a method for organizing, displaying, managing, and selecting options on a graphical user interface in which the options are distinguished by one of a plurality of distinguishing features such as size and shape (col. 1, lines 58-60; col.4, lines 36-48, *distinguishing features include: size, shape*). It would have been obvious to an artisan at the time of the invention to combine the teachings of Arcuri and Hocker with the display device of Munson in order to provide users with dynamically changing the available selectable options in a given short menu based upon the particular needs and utilization behavior of the user, and in order to provide users with a dynamic way of defining the relationship among the many different options on a graphical user interface by selecting different shapes to represent different functions (col. 1, line 63-col.2 line 16).

Claim 26 is rejected under the same rationale as claim 8.

Claim 34 is rejected under the same rationale as claim 10.

Claim 38 is rejected under the same rationale as claim 11.

Claim 42 is rejected under the same rationale as claim 12.

Claim 47 is rejected under the same rationale as claim 13.

Claims 7, 16, 20, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Munson et al. (U.S. Pat. No. 6,741,262), Arcuri et al. (U.S. Pat. No. 6,121,968) and Ezekiel et al. (U.S. Pat. No. 5,625,783).

Per claim 7, the modified Muson teaches the display device according to claim 1, but does not teach the first case or the second case is displayed is determined according to mounting conditions of additional devices. However, Ezekiel teaches the first case or the second case is displayed is determined according to mounting conditions of additional devices (col. 3, lines 10-20). It would have been obvious to an artisan at the time of the invention to combine the teachings of Ezekiel with the display device of the modified Munson in order to provide a system which can automatically and dynamically construct user interface menus "on the fly" during execution of a program.

Claim 16 is rejected under the same rationale as claim 7.

Claim 20 is rejected under the same rationale as claim 7.

Claim 23 is rejected under the same rationale as claim 7.

Claims 9, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Munson et al. (U.S. Pat. No. 6,741,262), Arcuri et al. (U.S. Pat. No. 6,121,968) and Moon et al. ("Moon" U.S. Pat. No. 6,433,801).

Per claim 9, the modified Munson teaches the display device according to claim 1, but does not teach the display unit further comprises a touch panel type display device which allows

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a user to select a function by touching a displayed area of one of the user-selectable image forming function options. However, Moon teaches the display unit further comprises a touch panel type display device which allows a user to select a function by touching a displayed area of one of the user-selectable image forming function options (col. 2, lines 49-64). Therefore, It would have been obvious to an artisan at the time of the invention to combine the teachings of Moon in the invention of the modified Muson in order to provide user with an alternative selection mechanism utilizing touch screen.

Claim 31 is rejected under the same rationale as claim 9.

Claims 21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Munson et al. (U.S. Pat. No. 6,741,262), Arcuri et al. (U.S. Pat. No. 6,121,968), Kino et al. ("Kino", US 6,469,719), and Ezekiel et al. (U.S. Pat. No. 5,625,783).

Per claim 21, the modified Muson teaches the display device according to claim 2, but do not teach the first case or the second case is displayed is determined according to mounting conditions of additional devices. However, Ezekiel teaches the first case or the second case is displayed is determined according to mounting conditions of additional devices (col. 3, lines 10-20). It would have been obvious to an artisan at the time of the invention to combine the teachings of Ezekiel with the display device of the modified Munson in order to provide a system which can automatically and dynamically construct user interface menus "on the fly" during execution of a program.

Claim 24 is rejected under the same rationale as claim 21.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Munson et al. (U.S. Pat. No. 6,741,262), Arcuri et al. (U.S. Pat. No. 6,121,968), Hocker et al. ("Hocker", US' 5,754,179), and Ezekiel et al. (U.S. Pat. No. 5,625,783).

Per claim 22, the modified Munson teaches the display device according to claim 3, but do not teach the first case or the second case is displayed is determined according to mounting conditions of additional devices. However, Ezekiel teaches the first case or the second case is displayed is determined according to mounting conditions of additional devices (col. 3, lines 10-20). It would have been obvious to an artisan at the time of the invention to combine the teachings of Ezekiel with the display device of the modified Munson in order to provide a system which can automatically and dynamically construct user interface menus "on the fly" during execution of a program.

Claims 29 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Munson et al. (U.S. Pat. No. 6,741,262), Arcuri et al. (U.S. Pat. No. 6,121,968), Kino et al. ("Kino", US 6,469,719), and Moon et al. ("Moon" U.S. Pat. No. 6,433,801).

Per claim 29, the modified Munson teaches the display device according to claim 2, but do not teach the display unit further comprises a touch panel type display device which allows a user to select a function by touching a displayed area of one of the user-selectable image forming function options. However, Moon teaches the display unit further comprises a touch panel type display device which allows a user to select a function by touching a displayed area of one of the user-selectable image forming function options (col. 2, lines 49-64). Therefore, It would have been obvious to an artisan at the time of the invention to combine the teachings of Moon in the

invention of the modified Munson in order to provide user with an alternative selection mechanism utilizing touch screen.

Claim 32 is rejected under the same rationale as claim 29.

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Munson et al. (U.S. Pat. No. 6,741,262), Arcuri et al. (U.S. Pat. No. 6,121,968), Hocker et al. ("Hocker", US' 5,754,179), and Moon et al. ("Moon" U.S. Pat. No. 6,433,801).

Per claim 30, the modified Munson teaches the display device according to claim 3, but do not teach the display unit further comprises a touch panel type display device which allows a user to select a function by touching a displayed area of one of the user-selectable image forming function options. However, Moon teaches the display unit further comprises a touch panel type display device which allows a user to select a function by touching a displayed area of one of the user-selectable image forming function options (col. 2, lines 49-64). Therefore, It would have been obvious to an artisan at the time of the invention to combine the teachings of Moon in the invention of the modified Munson in order to provide user with an alternative selection mechanism utilizing touch screen.

Response to Arguments

Applicant's arguments with respect to the amendment have been considered but are moot in view of the new ground(s) of rejection.

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh T. Vu whose telephone number is (571) 272-4073. The examiner can normally be reached on Mon-Thur and every other Fri 7:30 AM - 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine L. Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

T. Vu

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